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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,216	01/11/2002	Hideya Kinoshita	1417.1002 CIP	6978
21171	7590	04/08/2004		
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER SERGENT, RABON A	
			ART UNIT	PAPER NUMBER
			1711	

DATE MAILED: 04/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/042,216	<b>Applicant(s)</b> KINOSHITA ET AL.	
	<b>Examiner</b> Rabon Sergent	<b>Art Unit</b> 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 09/267,673.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 13, 2004 has been entered.

2. Claims 1-4 and 6 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Support has not been provided for claiming that the polyurethane foam is "dibutyl cresol-free". Applicants have failed to establish that "substantially free" encompasses "free". It is not seen that applicants' response has addressed this issue, as it pertains to the polyurethane foam.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over St. Clair et al. ('781) in view of Ishii et al. ('744).

St. Clair et al. disclose flexible polyurethane foam derived from the reaction of polyisocyanate with polyol, which meets applicants' claimed polyol, in the presence of foaming agent, catalyst, surfactant, and an antioxidant/stabilizer blend comprising relatively high molecular weight hindered phenolic compounds, which, in view of their molecular weights, are considered to be more closely related to applicants' claimed antioxidants than dibutyl cresol; phosphite ester secondary antioxidant; and benzotriazole UV absorbing agent. See abstract and columns 3-5, especially column 3, lines 57+ and column 4, lines 1-28.

5. Though St. Clair et al. disclose the use of relatively high molecular weight hindered phenol antioxidants at column 3, lines 57+, patentees fail to disclose the use of applicants' specifically claimed hindered phenol antioxidant. However, applicants' claimed hindered phenol antioxidant was a known antioxidant for polyurethanes at the time of invention. Ishii et al. disclose the use of 3,9-bis[1,1-dimethyl-2-[3-(3-tert-butyl-4-hydroxy-5-methylphenyl)propionyloxy]ethyl]-2,4,8,10-tetraoxaspiro[5.5]undecane as an antioxidant for polyurethanes. Ishii et al. further disclose that the use of the aforementioned compound remarkably improves the resistance of polyurethanes to yellowing due to the effects of nitrogen oxide gases, sunlight, etc. See column 1, lines 40+.

6. Therefore, in view of the aforementioned improvements associated with the use of 3,9-bis[1,1-dimethyl-2-[3-(3-tert-butyl-4-hydroxy-5-methylphenyl)propionyloxy]ethyl]-2,4,8,10-

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tetraoxaspiro[5.5]undecane within polyurethanes and since it has been held that it is *prima facie* obvious to utilize a known component for its art recognized purpose (*In re Linder*, 173 USPQ 356; *In re Dial et al.*, 140 USPQ 244), the position is taken that it would have been obvious to incorporate the antioxidant of the secondary reference into the composition of St. Clair et al., so as to arrive at the instant invention.

7. Applicants' response has been considered; however, it is insufficient to overcome the prior art rejection for the following reasons. Despite applicants' argument, it is not seen that applicants' examples demonstrate unexpected results. In view of the aforementioned teachings within Ishii et al., one of ordinary skill would have expected polyurethanes comprising the claimed phenolic compound to display improved resistance to discoloration from such sources as ultraviolet light and nitrogen oxides. Furthermore, with respect to color migration, it is noted that the examples of the invention are comparable to comparative examples 7-10. It is further noted that comparative examples 7-10 are the comparative examples most representative of the primary reference, St. Clair et al.; therefore, it is not seen that the data within the examples of the invention display unexpected results in view of the primary reference. Additionally, one would have logically expected that the use of the higher molecular weight phenolic compounds of St. Clair et al. will yield improved color migration results, because the higher molecular weight compounds are less likely to migrate or diffuse from the polyurethane.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

  
RABON SERGENT  
PRIMARY EXAMINER

R. Sergent  
March 30, 2004